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09/593,170	06/12/2000	Jeffrey Ying	251/068	5453

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EXAMINER	
TSAI, CAROL S W	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/593,170	Applicant(s) YING, JEFFREY	
	Examiner Carol S Tsai	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33 and 35-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-20,22-34,36-43 and 45-49* is/are rejected.

7)☒ Claim(s) *9,21,35, 44 and 50* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-8, 10-19, 36-43, and 45-49 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,884,202 to Arjomand.

With respect to claims 1 and 11, Arjomand discloses a system for facilitating diagnosis and maintenance of electronic control networks, comprising a wireless diagnostic device (combined user interface and main control module 12 shown on Fig. 2) adapted for manual transport (see Fig. 9 and col. 11, lines 31-46) which comprises a transmitter and receiver (RF antenna 28 shown on Fig. 2) for communicating over a wireless communication channel channel (see col. 5, lines 37-40 and col. 10, line 65 to col. 11, line 1) with a control network (VCI vehicle communication interface 14 and digital volt-ohm meter (DVOM) instrumentation module 16 shown on Fig. 6) (see col. 6, line 17 to col. 9, line 16); and at least one wireless ground station (main control module 54 shown on Fig. 9) comprising a ground station receiver (RF antenna 92 shown on Fig. 10) attuned to the wireless communication channel by where transmitted

messages between the wireless diagnostic device and the control network over the wireless communication channel are monitored (see Figs. 8-10 and col. 10, lines 16-54).

As to claims 40 and 45, Arjomand also discloses a system for facilitating diagnosis and maintenance of electronic control networks, comprising: a portable diagnostic device (combined user interface and main control module 12 shown on Fig. 2), said portable diagnostic device comprising a transmitter and receiver (RF antenna 28 shown on Fig. 2) for communicating over a wireless communication channel with an on-vehicle control network (VCI vehicle communication interface 14 and digital volt-ohm meter (DVOM) instrumentation module 16 shown on Fig. 6) (see col. 6, line 17 to col. 9, line 16), said on-vehicle control network comprising a control network wireless interface for communicating with said portable diagnostic device over said wireless communication channel (see col. 6, line 17 to col. 9, line 16) (see col. 5, lines 37-40 and col. 10, line 65 to col. 11, line 1); and at least one ground station (main control module 54 shown on Fig. 9), said at least one ground station comprising a ground station receiver (RF antenna 92 shown on Fig. 10) attuned to said wireless communication channel, whereby said ground station monitors messages transmitted over said wireless communication channel between said portable diagnostic device and said on-vehicle control network (see Figs. 8-10 and col. 10, lines 16-54).

As to claims 2, 12, 41 and 46, Arjomand also discloses a memory device for storing transmitted message (see col. 9, lines 17-30 and col. 10, lines 55-64).

As to claims 3, 13, 42, and 47, Arjomand also discloses a graphical display whereby information relating to the transmitted message being displayed (see Fig. 2).

As to claims 4, Arjomand also discloses a user interface and a ground station transmitter (see Fig. 9 and col. 9, lines 17-30).

As to claims 5, 10, 14, 15, 19, and 48, Arjomand also discloses instructions regarding diagnostic being transmitted by the ground station transmitter over the wireless communication channel in response to commands entered via the user interface (see col. 5, lines 41-54 and col. 9, lines 51-59).

As to claims 7, 16, 43, and 49, Arjomand also discloses a diagnostic and maintenance information database connected to at least one ground station by where information relating to the control network can be retrieved in response to a remote request received from the wireless diagnostic device (see col. 17, lines 31-45).

As to claims 8 and 17, Arjomand also discloses graphical information relating to the control network, the graphical information being displayed on a screen display at the wireless diagnostic device (see Fig 2).

As to claim 18, Arjomand also discloses transmitting messages between a wireless intermediary unit (RF antenna 28 shown on Fig. 2) and the on-board control network over said wireless communication channel, said wireless intermediary unit connected to a graphical display device (see Fig. 2).

As to claims 36-39, Arjomand also discloses the control network resides in a vehicle and controls or monitors electronic functions of the vehicles (see col. 6, line 17 to col. 9, line 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arjomand in view of U. S. Patent No. 6,330,499 to Chou et al.

As to claim 6, Arjomand also discloses an instruction to terminate a diagnostic session being transmitted by said ground station transmitter over said wireless communication channel in response to a command entered via said user interface (see col. 5, lines 41-54 and col. 9, lines 51-59)

Arjomand does not disclose instruction preventing further diagnostic activity by said wireless diagnostic device with respect to said control network.

Chou et al. teach the instruction preventing further diagnostic activity by said wireless diagnostic device with respect to said control network (see col. 6, line 62 to col. 7, line 25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Arjomand's system to include the instruction preventing further diagnostic activity by said wireless diagnostic device with respect to said control network, as taught by Chou et al., in order that vehicle faults can be notified.

6. Claims 20 and 22-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,884,202 to Arjomand in view of U. S. Patent No. 6,330,499.

Arjomand discloses a diagnostic and maintenance system, comprising: a portable wireless diagnostic device (combined user interface and main control module 12 shown on Fig. 2), said wireless diagnostic device comprising a transmitter and receiver (RF antenna 28 shown on Fig. 2) for communicating over a wireless communication channel (see col. 5, lines 37-40 and col. 10, line 65 to col. 11, line 1) with a control network (VCI vehicle communication interface 14 and digital volt-ohm meter (DVOM) instrumentation module 16 shown on Fig. 6) to be monitored, diagnosed, or tested (see col. 6, line 17 to col. 9, line 16); a wireless ground station (main control module 54 shown on Fig. 9) comprising a receiver (RF antenna 92 shown on Fig. 10) attuned to said wireless communication channel whereby transmitted messages between said portable wireless diagnostic device and the control network are monitored (see Figs. 8-10 and col. 10, lines 16-54).

Arjomand does not disclose a plurality of wireless ground stations; a ground station interface connected to the plurality of wireless ground stations; and a local area computer network connected to the ground station interface, the local area computer network comprising one user terminal that comprises a screen display by where information relating to the transmitted messages can be displayed.

Chou et al. teach a plurality of wireless ground stations (wireless base stations 150B); a ground station interface connected to the plurality of wireless ground stations (Intranet 150C, internet 150D, and public (or private) switch telephone network (PSTN) 150E shown on Fig. 1); and a local area computer network connected to the ground station interface, the local area computer network comprising one user terminal (see col. 3, lines 62-67 and col. 10, lines 48-51)

that comprises a screen display by where information relating to the transmitted messages can be displayed (see col. 7, lines 4-15 and col. 9, lines 22-27 and lines 51-59).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Arjomand's system to include a plurality of wireless ground stations; a ground station interface connected to the plurality of wireless ground stations; and a local area computer network connected to the ground station interface, the local area computer network comprising one user terminal that comprises a screen display by where information relating to the transmitted messages can be displayed, as taught by Chou et al., in order that a wild world remote maintenance monitoring system can be created and all information relating to the transmitted message can be displayed on a LAN computer screen.

As to claim 27, Arjomand also discloses a diagnostic and maintenance system, comprising: a portable wireless diagnostic device (combined user interface and main control module 12 shown on Fig. 2) comprising a transmitter and receiver (RF antenna 28 shown on Fig. 2), said portable wireless diagnostic device communicating wirelessly with one control network (VCI vehicle communication interface 14 and digital volt-ohm meter (DVOM) instrumentation module 16 shown on Fig. 6) (see col. 6, line 17 to col. 9, line 16) to be diagnosed, monitored, or tested, said portable wireless diagnostic device programmed to perform at least one diagnosis or test function relating to a control network (see col. 5, lines 37-40 and col. 10, line 65 to col. 11, line 1); and a wireless ground station (main control module 54 shown on Fig. 9) comprising a ground station receiver (RF antenna 92 shown on Fig. 10) attuned to said wireless communication channel utilized by the portable wireless diagnostic device and the control network (see Figs. 8-10 and col. 10, lines 16-54).

Arjomand does not disclose a plurality of wireless diagnostic device.

The Examiner takes Official Notice that it is known to duplicate or multiply components in order to duplicate or multiply their functions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Arjomand's system to include a plurality of wireless diagnostic device, in order each diagnostic device can monitor the functionality of the control network respectively.

As to claims 22 and 29, Arjomand also discloses a memory device connected to a local area computer network, for storing transmitted monitored by a wireless ground station over the wireless communication channel (see col. 9, lines 17-30 and col. 10, lines 55-64).

As to 23 and 30, Arjomand also discloses instructions regarding diagnostic being transmitted by the ground station transmitter over the wireless communication channel in response to commands entered via the user interface (see col. 5, lines 41-54 and col. 9, lines 51-59).

As to claims 24 and 31, Arjomand also discloses an instruction to terminate a diagnostic session being transmitted by the ground station transmitter over the wireless communication channel in response to commands entered via the user interface (see col. 6, lines 6-14).

As to claims 25 and 32, Arjomand also discloses a diagnostic and maintenance information database connected to local area computer network by where information relating to the control network is retrieved in response to a remote request received from the wireless diagnostic device (see col. 17, lines 31-45).

As to claims 26 and 33, Arjomand also discloses graphical information relating to the control network, the graphical information being displayed on a screen display at the portable wireless diagnostic device (see Fig. 2).

As to claim 28, Arjomand also discloses a ground station interface connected to said at least one wireless ground stations, and a local area computer network connected to said ground station interface, said local area computer network comprising a user terminal, said user terminal comprising a screen display whereby information relating to said transmitted messages is displayed (see Figs. 8-10).

Allowable Subject Matter

7. Claims 9, 21, 35, 44, and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-8, 10-20, 22-43, and 45-49 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner

and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. Tsai

11/22/02

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